

123-33**PAD-PRINTABLE, B-STAGEABLE, ELECTRICALLY CONDUCTIVE, EPOXY ADHESIVE**

DESCRIPTION: 123-33 is a B-Stageable, electrically conductive, one part epoxy coating and adhesive that has been pre-catalyzed with CMI 119-44 to allow for low temperature cure. It is the pre-catalyzed version of 123-21. It is suitable for application by pad- printing, dipping and syringe dispensing. This product is designed for bonding capacitors to lead frames; other applications include, but are not limited to assembling electrical and electronic components. This system features excellent thermal stability and high temperature properties. CMI product 118-06 is a 0.0008 Ω -cm, silver filled version of 123-21/123-33.

PROPERTIES:

Viscosity (cps)	10,000-15,000
Filler	Carbon
Glass Trans. Temp. ($^{\circ}$ C)	100
Sheet Resistivity (Ω /sq/mil)	30k – 70k
Volume Resistivity (ohms-cm)	76 – 177
Solderable	No
Hydrolytic Stability	Excellent
Useful Temperature Range ($^{\circ}$ C)	-55 to +230
Thermal Stability ($^{\circ}$ C)	Good to 325
T-Shear Strength (psi)	2100

SUGGESTED HANDLING AND CURING: Material is ready to use as received. Store frozen to maintain consistent flow properties. Allow material to warm up to room temperature before opening container. As an adhesive, apply the 123-33 to one or both parts, then mate the parts and cure per the schedule below while maintaining pressure. 123-33 can be thinned with small amounts of CMI# 113-39 (fast drying), or #114-20 (slow drying) thinners.

CURE SCHEDULE

4 hours at 80 $^{\circ}$ C	or	1 hour at 125 $^{\circ}$ C, or
2 hours at 100 $^{\circ}$ C	or	30 minutes at 150 $^{\circ}$ C

PRODUCT STORAGE: Shelf Life 1 week at 25 $^{\circ}$ C; or 4 months at -10 $^{\circ}$ C.

B-STAGE PROCEDURE: Apply adhesive to substrate. Next apply heat to advance the curing to the non-tacky stage when cooled to room temperature. A temperature of 125 $^{\circ}$ C for 1-2 minutes is required. B-Stage time is mass related. User is encouraged to experiment for optimum drying time at a given temperature. Store on release liner to prevent contamination.

STORAGE B-STAGED FILM: Shelf Life - 1 month @ 25 $^{\circ}$ C; or 3 months @ -10 $^{\circ}$ C

BONDING PROCEDURE: To use, carefully align parts to be bonded, apply uniform pressure to maintain location. Cure per the above schedule. (Note cure times given are mass related timing should start after adhesive and substrates reach curing temperature.)

SAFETY AND HANDLING: Use with adequate ventilation. Keep away from sparks and open flames. Avoid prolonged contact with skin and breathing of vapors. Wash with soap and water to remove from skin.

All technical information is based on data obtained by CMI personnel and is believed to be reliable. No warranty is either expressed or implied with respect to results or possible infringements on patents.

REVISION DATE: 3/1/04 REVISION: A